

**MULTIPLEXED DATA TRANSMISSIONS THROUGH A
COMMUNICATION LINK**

ABSTRACT OF THE INVENTION

A communication technique enables the efficient transmission of data through a communication link having a large delay bandwidth product and/or a high bit error rate. The communication technique multiplexes data from one or more data sources through a plurality of communication connections to increase the overall throughput and to reduce the average data transfer delay of the communication link. Each communication connection has a set of communication connection parameters that may be uniquely configured so that each connection carries a particular type of data at a particular effective priority level. Each communication connection may be uniquely configured to have a particular sending buffer size, to deliver messages having a particular length to an underlying layer and to send the messages into the link at a particular rate to orchestrate the manner in which the communication connections send data through the link.